State of Utah

Department of
Natural Resources

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Division of
Oil, Gas & Mining

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June 4, 2004

CERTIFIED RETURN RECEIPT
7099 3400 0016 8896 0334

Eric York
Moab Salt, LLC
P.O. Box 1208
Moab, Utah 84532

Subject: Second Review of Notice of Intention to Commence Large Mining Operations, Moab Salt LLC, Cane Creek Mine, M/019/005, Grand County, Utah

Dear Mr. York:

The Division has completed a review of your draft response to the Division's initial technical review sent to you on March 4, 2004 for the Cane Creek Mine, located in Grand County, Utah. Your response was received March 31, 2004. After reviewing the information, the Division has the following comments which need to be addressed before tentative approval may be granted.

The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion. **Please address only those items requested in the attached technical review. You may send replacement pages of the original notice using redline and strikeout text, so we can see what changes have been made. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records.** Please provide a response to this review by July 5, 2004, 2004.

We have yet to receive comments from the Department of Environmental Quality. Although some of their comments will likely be outside the scope of the R647 rules, there could be additional issues that will need to be addressed before the Division of Oil, Gas and Mining can issue final approval.

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We will suspend further review of the Cane Creek Mine Notice of Intention until your response to this letter is received. If you have any questions in this regard please contact me, Paul Baker or Doug Jensen of the Minerals Staff. If you wish to arrange a meeting to sit down and discuss this review, please contact us at your earliest convenience. Thank you for your cooperation in completing this permitting action.

Sincerely,

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

DWH:jb
Attachment: Review
cc: Jenifer Robinson, DEQ
R. Showengerdt, Shaw Enviro
B. Bartoszek, Shaw Enviro, 790 Marvelle Lane, Green Bay, WI 54304
O:\M019-Grand\M0190005-MoabSalt\final\2ndREV-LMO-06042004.doc

SECOND REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Moab Salt, LLC
Cane Creek Mine

M/019/005

R647-4-105 - Maps, Drawings & Photographs

105.2 Surface facilities map
Maps included in the latest plan need to be revised to remove the slurry delivery system if it is no longer a part of the closure plan. (DJ)

R647-4-110 - Reclamation Plan

110.2 Roads, highwalls, slopes, drainages, pits, etc., reclaimed
Landfill Design & Construction
Your response states that the dozer operator will be cross-trained to also function as the construction manager/landfill inspector. Keeping logs and documenting the volume of material being placed in the landfill and then grading and compacting the material in the dump, can be very time consuming.
Will this cross-training result in the dozer operator's wage being increased? Will performing these additional functions require additional time? (DJ)

Pond Surface Flushing
The surety should include the cost of laborers to weld the HDPE pipe lengths and the cost of the D-5 to assist in the welding operation. (DJ)

The welder will also require a/c power to operate; the cost of a portable power source should be included in the surety. (DJ)

The length of the 2" flushing lines was increased to reach certain areas. The fittings and nozzle remained the same.
If the additional length of flushing lines requires additional fittings, please adjust the surety to cover this additional amount. (DJ)

110.2.4 Plant Area
The plan says a 2-foot lift of growth material will be placed over the salt storage area after the liners are removed.
Where will this material come from (distance from the storage area)? Time has been allotted for salt removal but none is apparent for placement of the additional material. (DJ)

110.2.5 Pipeline Areas
Pipelines not used as a part of the reclamation are to be dragged to the landfill, cut and buried.

The cost summary does not reflect time, equipment and labor to perform this operation. (DJ)

Removal of Salt and Residual Fluids
The plan says a loader with a wheel brush will be used to force waste solution into sumps. These ponds encompass multiple acres and are essentially flat.
Describe how a single loader with a brush will be able to force water to these sumps. (DJ)

Please describe how these sumps will be constructed and the approximate number of sumps will be needed to remove the solutions from these ponds. (DJ)

110.2.6 – Solar Ponds
The plan says twelve-inch-minus rock mulch will be placed over 90 acres of the solar ponds after the growth medium cap has been placed.
The other 361.8 acres of the solar pond are to be ripped to remove compaction and seeded. Please commit to place a similar rock cover to this additional acreage. (DJ)

The plan states on this 90 acres of replaced growth medium, only one truckload (25 tons) of rock mulch will be placed over each acre.
Will placing ~1 pound of rock per square foot provide sufficient coverage for wind protection? Distributing this material at this level will almost require hand raking, how is this material to be spread? (DJ)

The berm fill material will not provide sufficient growth medium to cover a 90 acre area with 3 foot of material. The deficit of approximately 58,695 cubic yards of material will come from the solar pond area and adjacent areas. Where are these areas and what kind of soils do they have? Are they already disturbed? (DJ & PBB)

If the plan envisions additional material coming from adjacent areas, additional equipment to move this material and a plan for the reclamation of the areas affected by this activity should be included. If the material is to be recovered from within the solar pond areas, additional dozer time should be included for this purpose. (DJ)

110.2.9 Solar Pond Infrastructure Areas
The surety calculations for this area only allows for 6 hours of truck and backhoe time to remove salt impacted soils.
The plan states that there is a total of 39,285 square feet of area impacted by brine releases. Six hours of equipment time to remove this amount of material is not sufficient. Please reevaluate this task and adjust to hours accordingly. (DJ)

The surety only allows 16 hours to rip and regrade this area.
The surety estimates in this area reflects a ripping rate for a D-9 dozer at 2 acres per hour. The estimate of two acres/hour for a dozer ripping compacted areas 2 feet deep with three rippers is too high. The average of 1 acre/hour used in other sections of the plan will be sufficient. (DJ)

The plan states that this entire area (18 acres) has been impacted by mining activities. The surety only indicates that 0.9 acres of this area will be revegetated. What treatments will the other 17.1 acres receive? (DJ)

110.3 Description of facilities to be left (post mining use)

Section 110.2.12 says the improved mining roads are to be left as part of the postmining land use for access and travel throughout the site. Exhibit 110-8 shows some of these roads being reclaimed. The plan needs to give some justification for leaving mining roads. Most of the improved mining roads shown on Exhibit 110-8 would not be reclaimed, and nearly all of them are near other county, state or private roads that would provide access to nearly the same areas. (PBB)

The plan says stockpiled material removed from the landfill canyon floor will be used to build the diversion dam at the toe of the landfill.
The plan stated previously that only 2 to 3 feet of material would be available for harvest from the canyon floor. Those 2 to 3 feet of material will be used to cap the landfill upon completion.
If all the material stripped from the canyon floor is used to cap the landfill, there will not be any material available to construct the diversion berm. If this is a fact, where will the additional material needed to construct the berm come from? (DJ)

Salt-affected soils from several areas would be disposed of in the landfill. The sequencing of disposal of these soils needs to be such that they will not contact and potentially contaminate the surface soils. Rather, they should be buried more deeply so there is less likelihood for capillary rise or for the salt-contaminated soils to otherwise come into contact with plant roots. The plan should contain a commitment to this effect. These salt-contaminated soils would work along with material from the tailings pond dam to fill voids in demolition debris as the landfill is being constructed. (PBB)

The diversion dam is to be compacted. The plan utilizes a D-5 dozer to place the material in the dam. What will be used to compact this material, as a D-5 dozer does not exert sufficient ground pressure to attain any high degree of compaction. (DJ)

According to the plan the rip-rap material used on this berm will come from the tailings pond dam. This dam material contains a fair amount of fines incorporated with the coarse material.
Will this material need to be screened before it can be used for rip-rap? If screening is necessary additional equipment will be needed to complete this task. (DJ)

110.5 Revegetation planting program

Under the Revegetation plan it is stated that seeding will be done in conjunction with ripping of the site.
Ripping time for all areas in the plan that are to be reseeded should be increased to allow additional operator time that will be needed to load seed on the dozer and to keep the seed

hopper filled. While seeding behind the dozer removes a step in the process, it requires quite a bit more time to complete the ripping. (DJ)

The plan states that ripping compacted areas within the plant area will be cross-ripped. The ripping rate of 1 acre/hour will need to be reduced when compacted areas require cross-ripping. Productivity will normally drop by at least half when the dozer cross-rips an area. (DJ)

Section 110.5.5 gives details of the test plot designs. In the section on lined and perforated test plots, the plan says the test plots will receive 24 and 36 inches of alluvial borrow material from the identified borrow sources. Are these the soils that were formerly to be slurried to the solar ponds? (PBB)

R647-4-113 – Surety

Table 110-2 notes a change in Belair's load estimate for trucks removing construction debris. Has the equipment time for loading of this debris been adjusted accordingly? (DJ)